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10/589,983	08/18/2006	Shingo Yokoyama	520.46481X00	2448

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EXAMINER

DUNWIDDIE, MEGHAN K

ART UNIT	PAPER NUMBER
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2875

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/589,983	Applicant(s) YOKOYAMA ET AL.	
	Examiner MEGHAN K. DUNWIDDIE	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/18/06 & 01/28/08</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This Office Action is a Non-Final Rejection in response to the application filed on August 18, 2006 by **Yokoyama** et al.

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on August 18, 2006 and January 28, 2008 are in compliance with the provisions of 37 CFR 1.97, and accordingly, the information disclosure statements have been considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8/1, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by **Hege** (US 5938319).

4. In reference to Claim 1, **Hege** shows a vehicle headlight having a light source to emit light and a reflector for illuminating forward the light emitted from the light source, wherein the reflector is comprising:

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- A plurality of movable mirrors to be operated independently and optionally and a fixed mirror disposed outside these movable mirrors, whereby the light emitted from the light source to the movable mirrors are not blocked mutually [Figure 1: (22 and 10) and Figure 2a: (24)].

5. In reference to Claim 8/1, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

6. In reference to Claim 9, **Hege** shows a vehicle operation support apparatus with a vehicle headlight having a light source to emit light and a reflector for illuminating forward the light emitted from the light source, wherein the reflector is comprising:

- A plurality of movable mirrors to be operated independently and optionally and a fixed mirror disposed outside these movable mirrors, whereby the light emitted from the light source to the movable mirrors is not blocked mutually [Figure 1: (22 and 10) and Figure 2a: (24)].

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-7 and 8/2-8/7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Hege** (US 5938319) in view of **Kato** et al. (US 2004/0075522).

9. Regarding Claim 2, **Hege** shows the claimed invention as cited above, but does not specifically teach the movable mirrors are operated in a direction of to axes at right angles to each other.

10. Regarding Claim 8/2, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

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11. **Kato** et al. teaches:

- The movable mirrors are operated in a direction of two axes at right angles to each other [Figure 12].

12. It would have been obvious for one of ordinary skill in the art, at the time of the invention to provide the vehicle headlight of **Hege** with movable mirrors operated in a direction of two axes at right angles to each other as taught by **Kato** et al. for the purpose and advantage of directing the light in a particular direction.

13. Regarding Claim 3, **Hege** shows the claimed invention as cited above, but does not specifically teach the movable mirror as set forth in the claim.

14. Regarding Claim 8/3, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

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15. **Kato** et al. teaches:

- The movable mirror is comprising a mirror member, first beam connecting the mirror member, a frame positioned so as to surround the mirror member, second beam connecting the frame and a mirror base plate placed outside the frame, wherein the first and second beams work as rotational axes of the mirror member at right angles to each other, and the frame, beams and mirror base plate reflect the light emitted from the light source, respectively [Figure 12].

16. It would have been obvious for one of ordinary skill in the art, at the time of the invention to provide the vehicle headlight of **Hege** with a movable mirror as taught by **Kato** et al. for the purpose and advantage of directing the emitted light in a particular direction.

17. Regarding Claim 4, **Hege** shows the claimed invention as cited above, but does not specifically teach the details as set forth in the claim.

18. Regarding Claim 8/4, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of

the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

19. **Kato** et al. shows:

- Back side of the movable mirror is formed out of either a soft magnetic material, a permanent magnet or a coil, and a plurality of stator coil positioned facing the back side of the movable mirror, and a magnetic force between the movable mirror and the stator coil is controlled so as to operate the movable mirror with an optional angle in the direction of two axes at right angles to each other [Figure 1: (7)].

20. It would have been obvious for one of ordinary skill in the art, at the time of the invention to provide the vehicle headlight of **Hege** with a movable mirror as taught by **Kato** et al. for the purpose and advantage of operating the movable mirror.

21. Regarding Claim 5, **Hege** shows:

- The movable mirror is operated to optionally alter a distribution of light illuminated from the vehicle headlight [Figure 1: (18)].

22. Regarding Claim 8/5, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution

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of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

23. Regarding Claim 6, **Hege** shows:

- A high-intensity discharge lamp is used for the light source, and the movable mirror is operated to control light illuminated from the vehicle headlight [Figure 1: (10)].

24. Regarding Claim 8/6, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

25. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hege** (US 5938319) and **Kato** et al. (US 2004/0075522) as applied to claim 5 above, and further in view of **Dassanayake** et al. (US 2002/0196636).

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26. Regarding Claim 7, **Hege** and **Kato** et al. shows the claimed invention as cited above, but do not specifically teach the details as set forth in the claim.

27. Regarding Claim 8/7, **Hege** shows:

- A sensor for detecting a situation surrounding the vehicle and other sensor for detecting an operational condition of the vehicle, wherein a distribution of the light illuminated from the vehicle headlight is controlled with optimal to the situation surrounding the vehicle and to the operational condition of the vehicle based on the output of these sensors [See column 7 lines 12-20 in reference to Figure 6: (34)].

28. **Dassanayake** et al. teaches:

- A part of plurality of movable mirrors have a function of transmitting visible light emitted from the light source and reflecting infrared light emitted from the light source, and further comprising an electric circuit for controlling the part of plurality of the movable mirrors independently of other part of plurality of movable mirrors [See page 3 paragraph [0034]].

29. It would have been obvious for one of ordinary skill in the art, at the time of the invention to provide the vehicle headlight of **Hege** and **Kato** et al. with a plurality of movable mirrors have a function of transmitting visible light emitted from the light source and reflecting infrared light emitted as taught by **Dassanayake** et al. for the purpose and advantage of transmitting infrared light.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MEGHAN K. DUNWIDDIE whose telephone number is (571)272-8543. The examiner can normally be reached on Monday through Friday 8 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571)272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sandra L. O'Shea/
Supervisory Patent Examiner, Art
Unit 2875

MKD